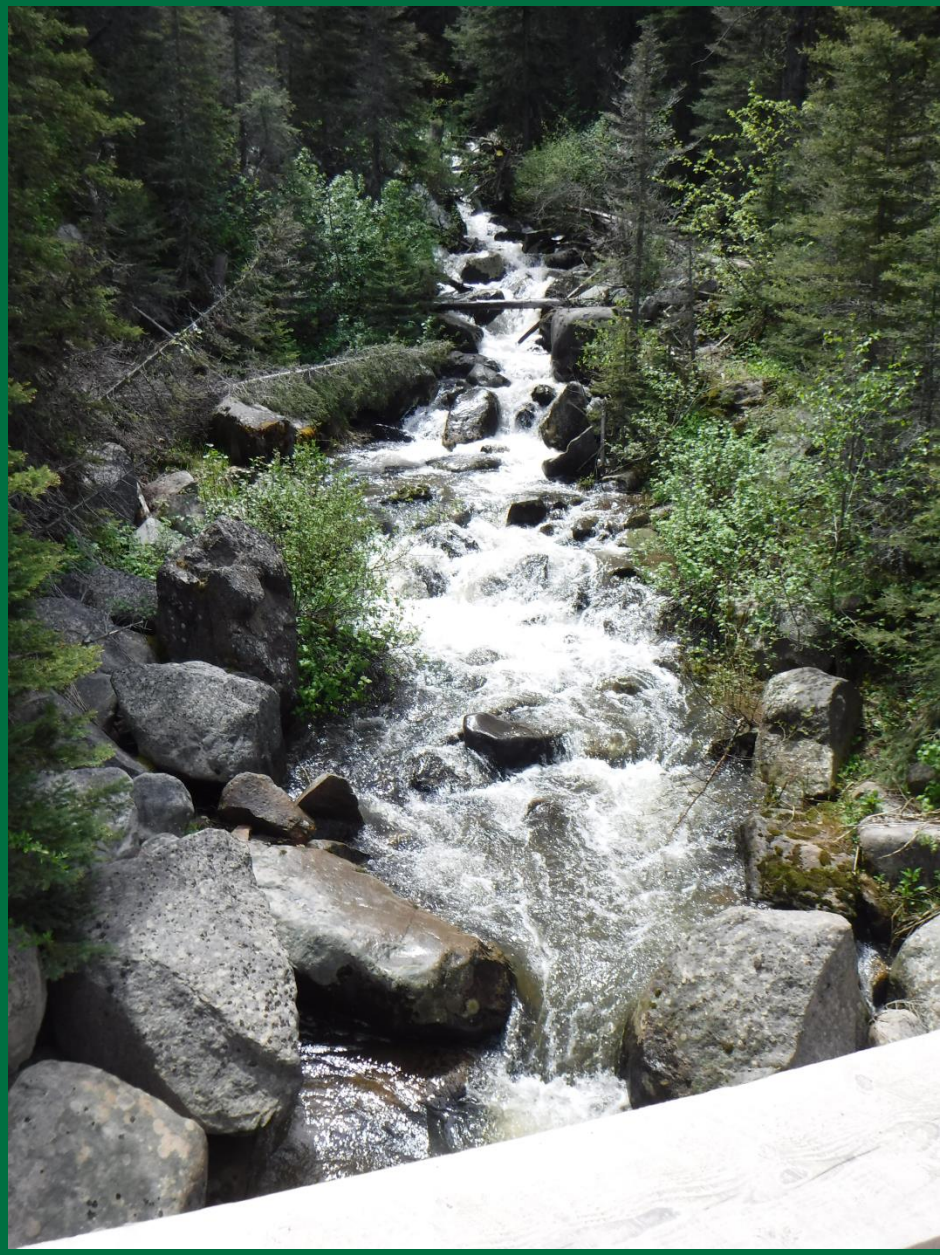
Tenmile Creek water-quality data

Tom Cleasby and
Chris Ellison
USGS and
Tenmile/South Helena Collaborative

June 14, 2017



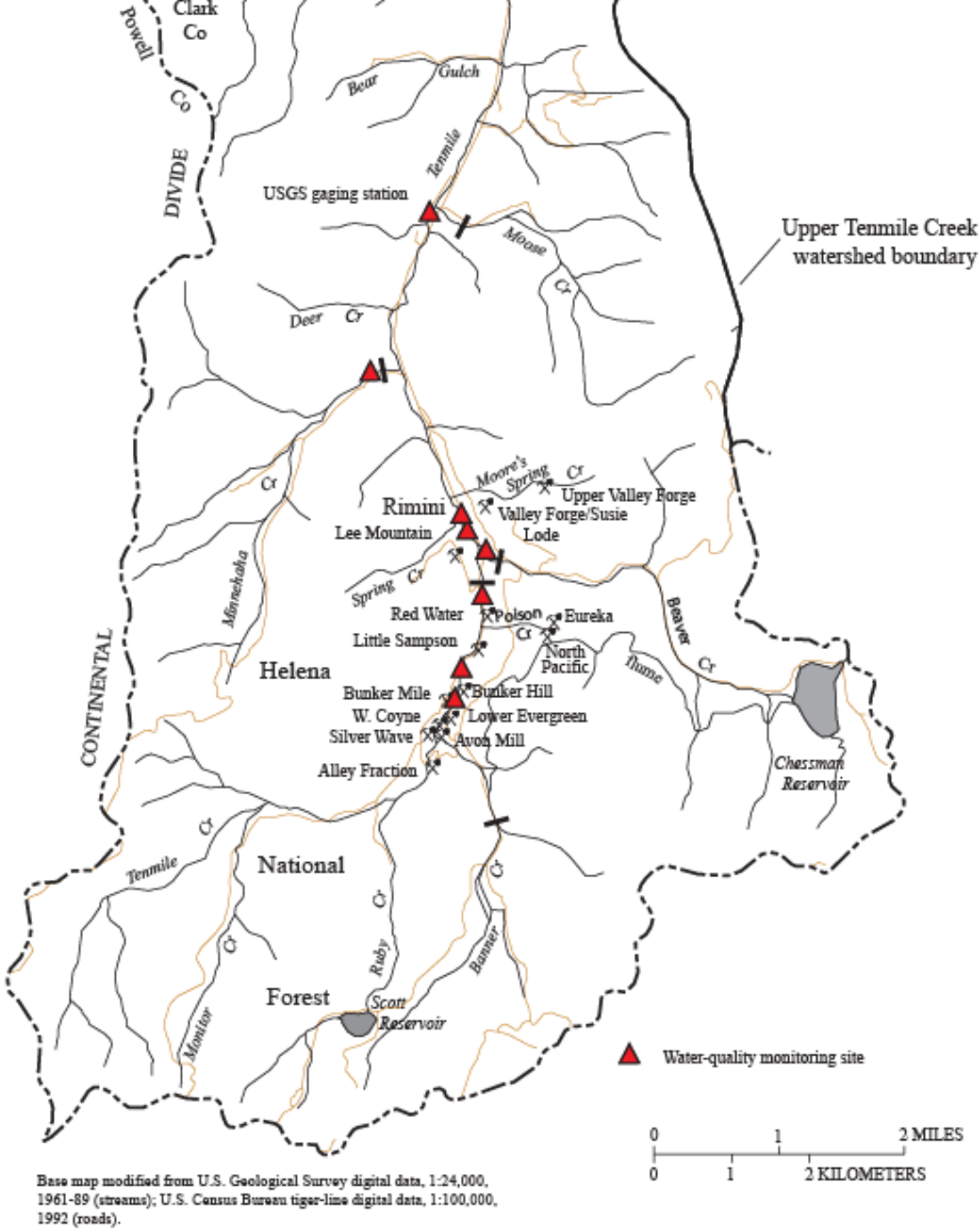
USGS

Tenmile Surface Water

- USGS has collected samples since 1997
- Sampling sites 2016 – 8 Surface water sites:
  - Tenmile Creek above Bunker Hill Mine, Tenmile Creek below Bunker Hill Mine, Tenmile Creek above City Diversion, Beaver Creek below City Diversion, Tenmile Creek above Suzie Lode Adit, Tenmile Creek below Spring Creek, Minnehaha Creek above City Diversion, and Tenmile Creek near Rimini (Moose Creek gage)
  - Sampled 2 times per year
  - Field parameters – Streamflow, pH, SC, air temp, and water temp
  - Chemical analyses – Hardness, filtered and unfiltered As, Cd, Cu, Pb, Zn, and suspended sediment
- Streamflow gage at Tenmile Creek near Rimini (near Moose Creek)

USGS

Tenmile Sampling Sites 2016



USGS

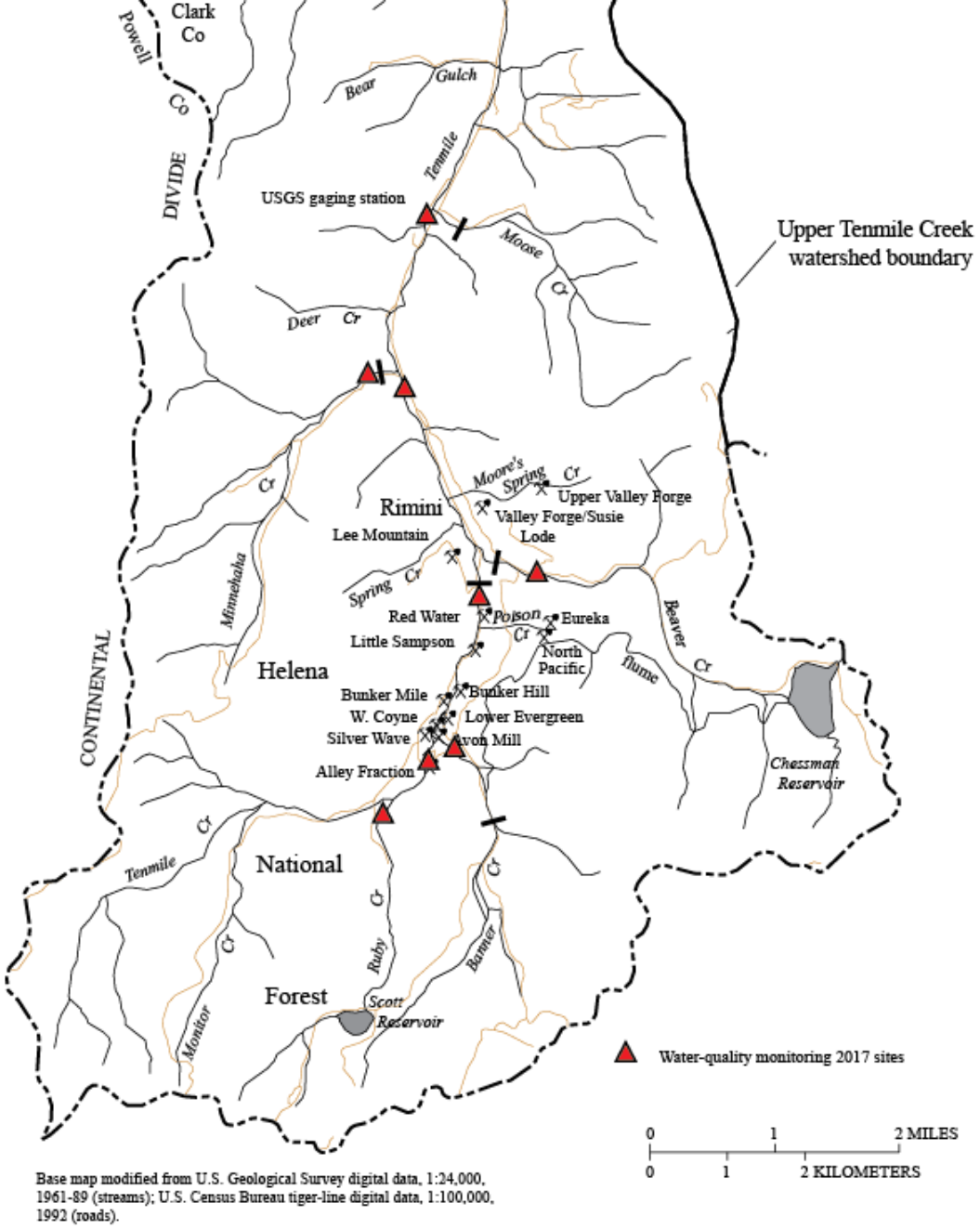
Tenmile Surface Water changes in 2017

- **Sites being added**
  - Banner Creek below City Diversion
  - Ruby Creek at Mouth
  - Tenmile below Ruby Creek
  - Beaver Creek above City Diversion
  - Tenmile above Minnehaha Creek
- **Sites being discontinued**
  - Tenmile Creek above Bunker Hill
  - Tenmile Creek below Bunker Hill
  - Beaver Creek below City Diversion
  - Tenmile Creek above Suzie Lode Adit
  - Tenmile Creek below Spring Creek

USGS

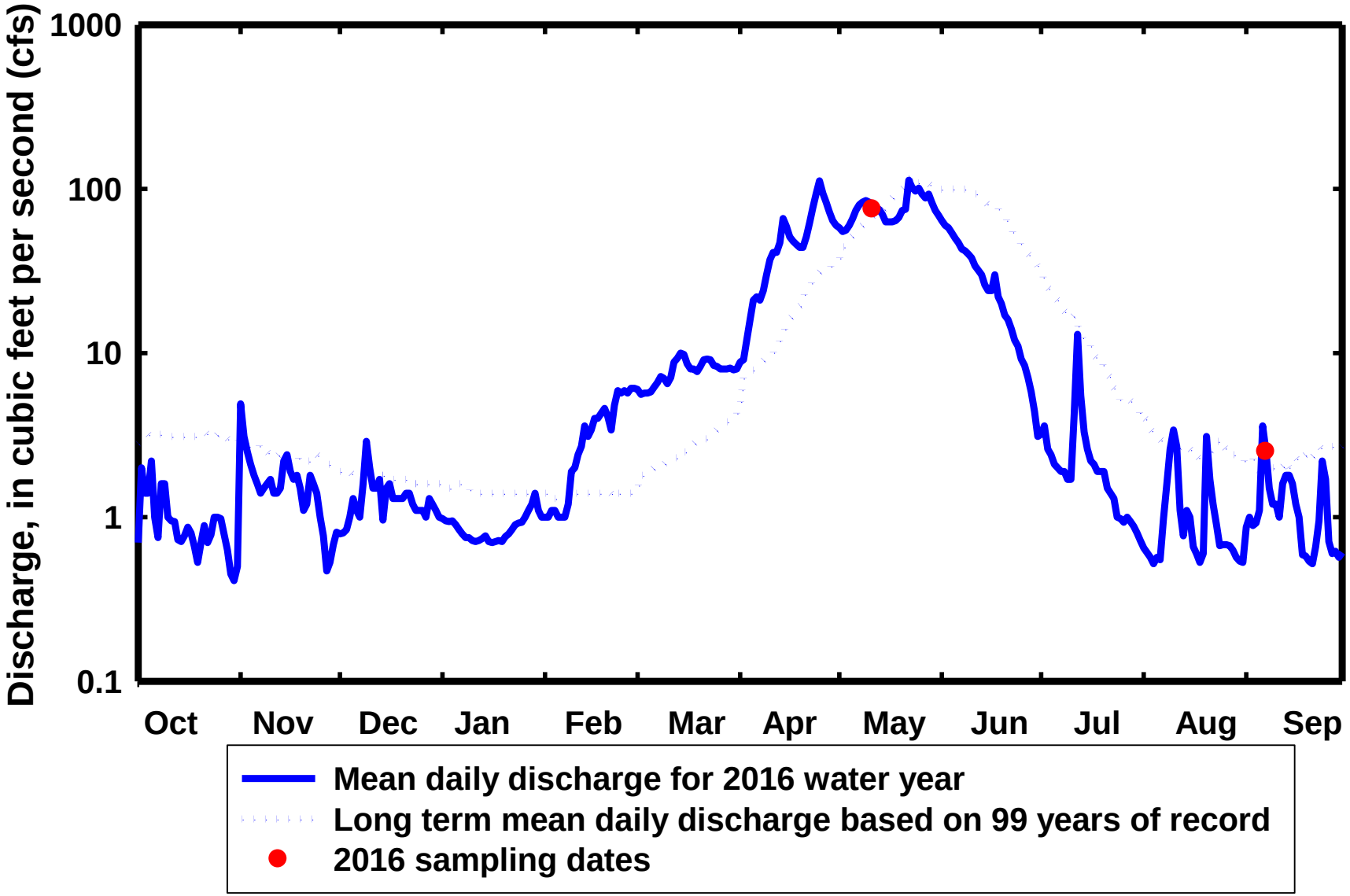
Tenmile Sampling Sites 2017

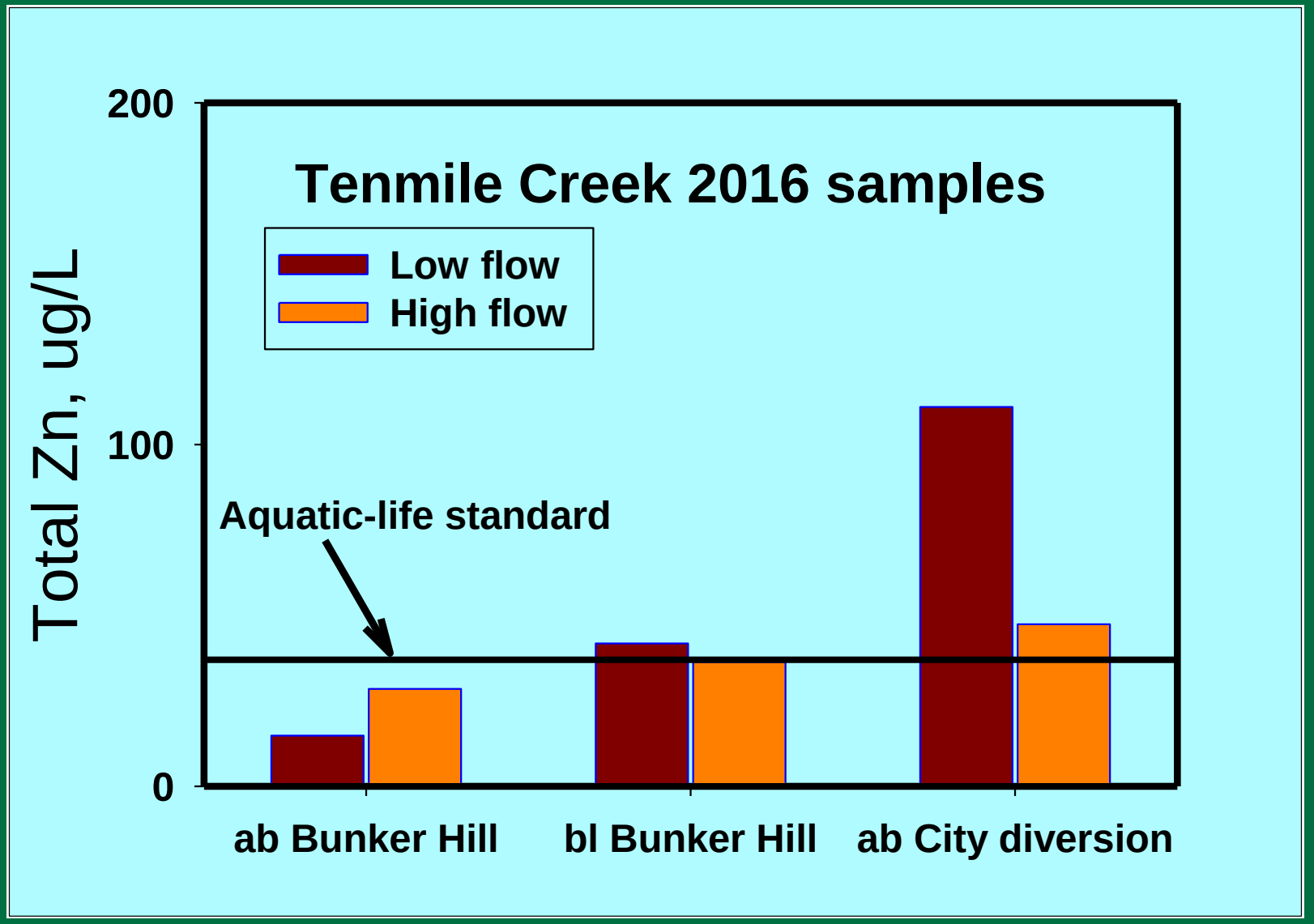
USGS

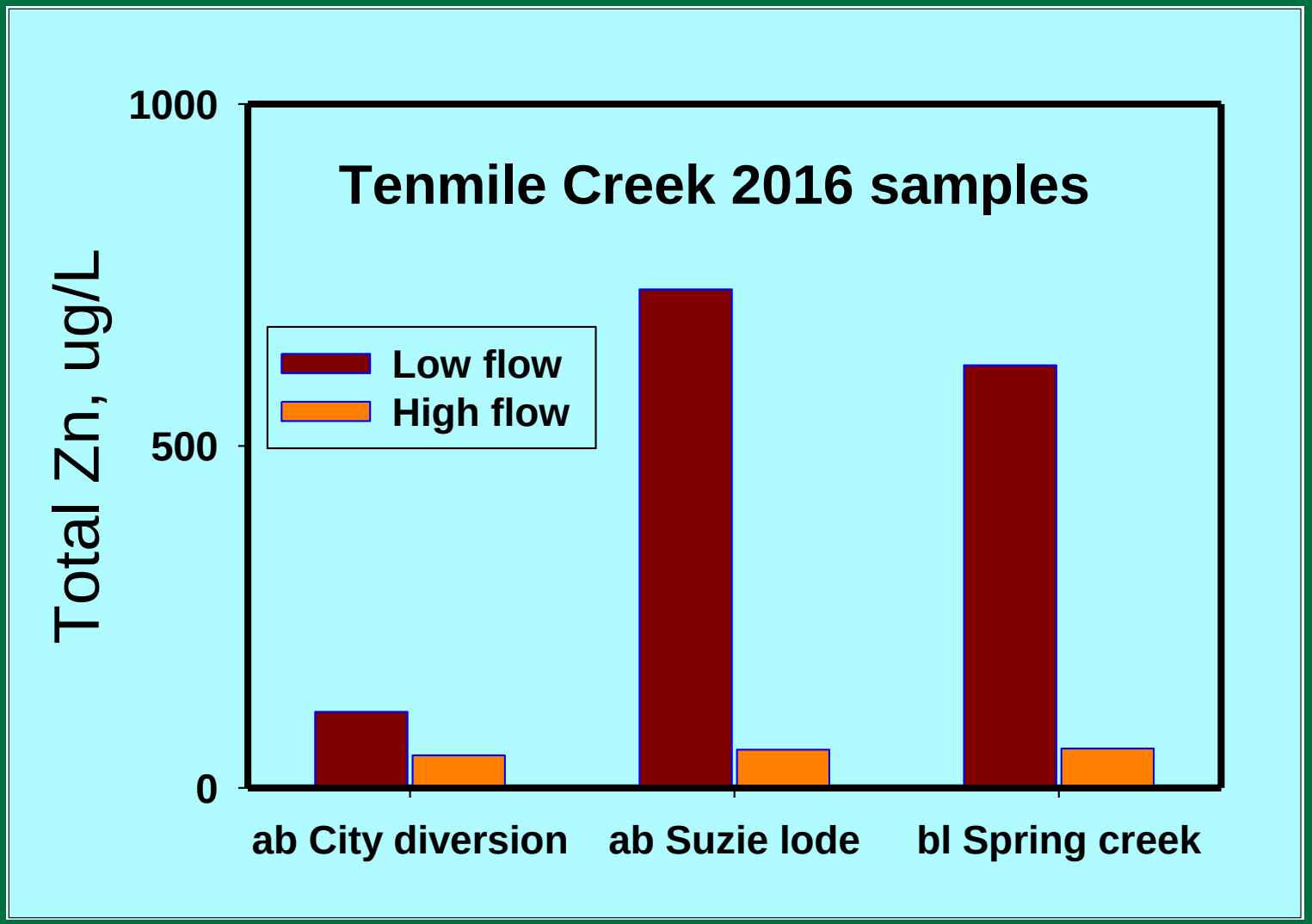


Monitoring sites in the Tenmile Creek watershed

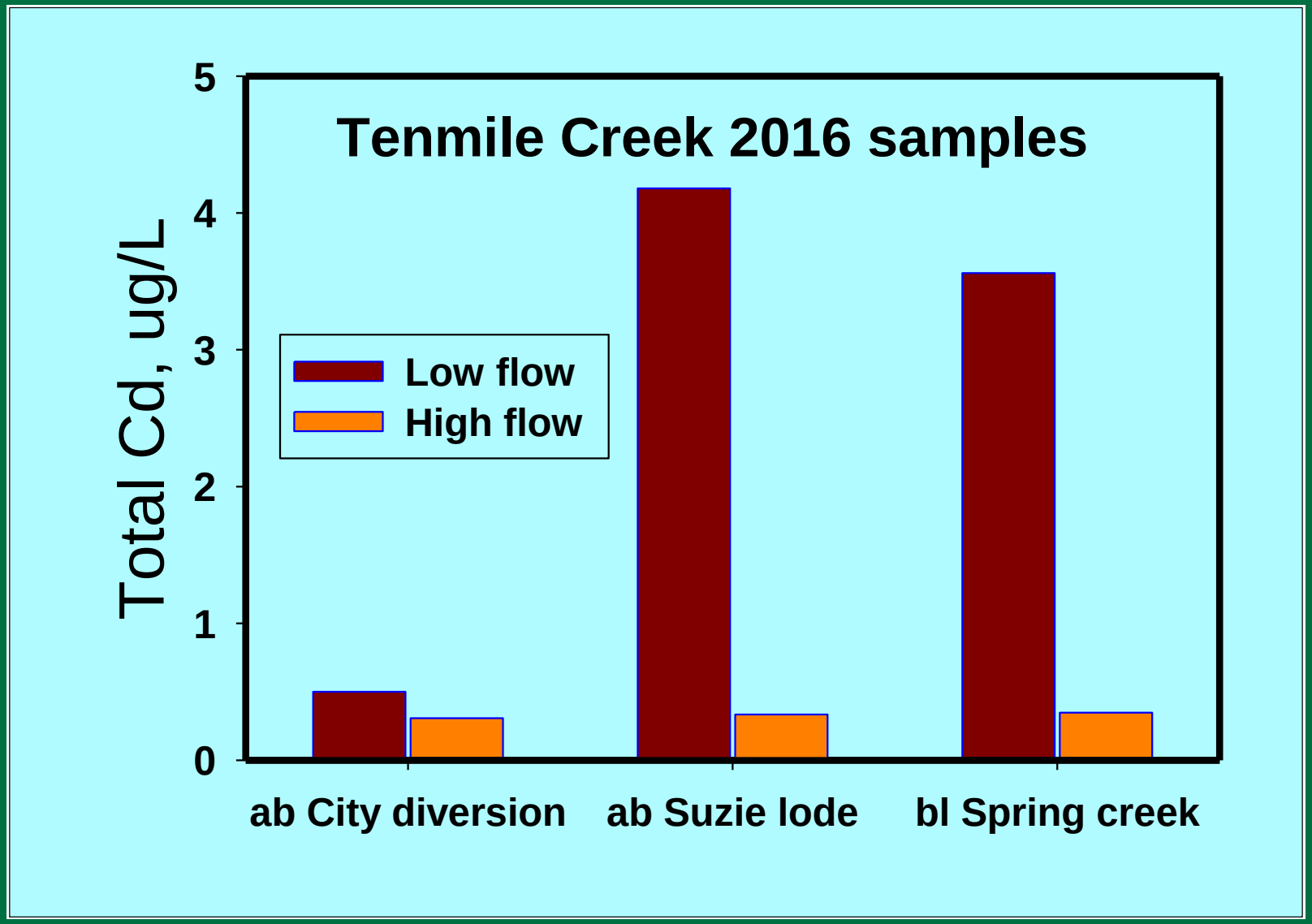
Tenmile Creek near Rimini, MT (at Moose Creek)
2016 Water Year




Tenmile Creek 2016 samples
Low flow
High flow
Total Zn, ug/L
200
100
0
Aquatic-life standard
ab Bunker Hill
bl Bunker Hill
ab City diversion


Tenmile Creek 2016 samples
Total Zn, ug/L
1000
500
0
Low flow
High flow
ab City diversion
ab Suzie lode
bl Spring creek

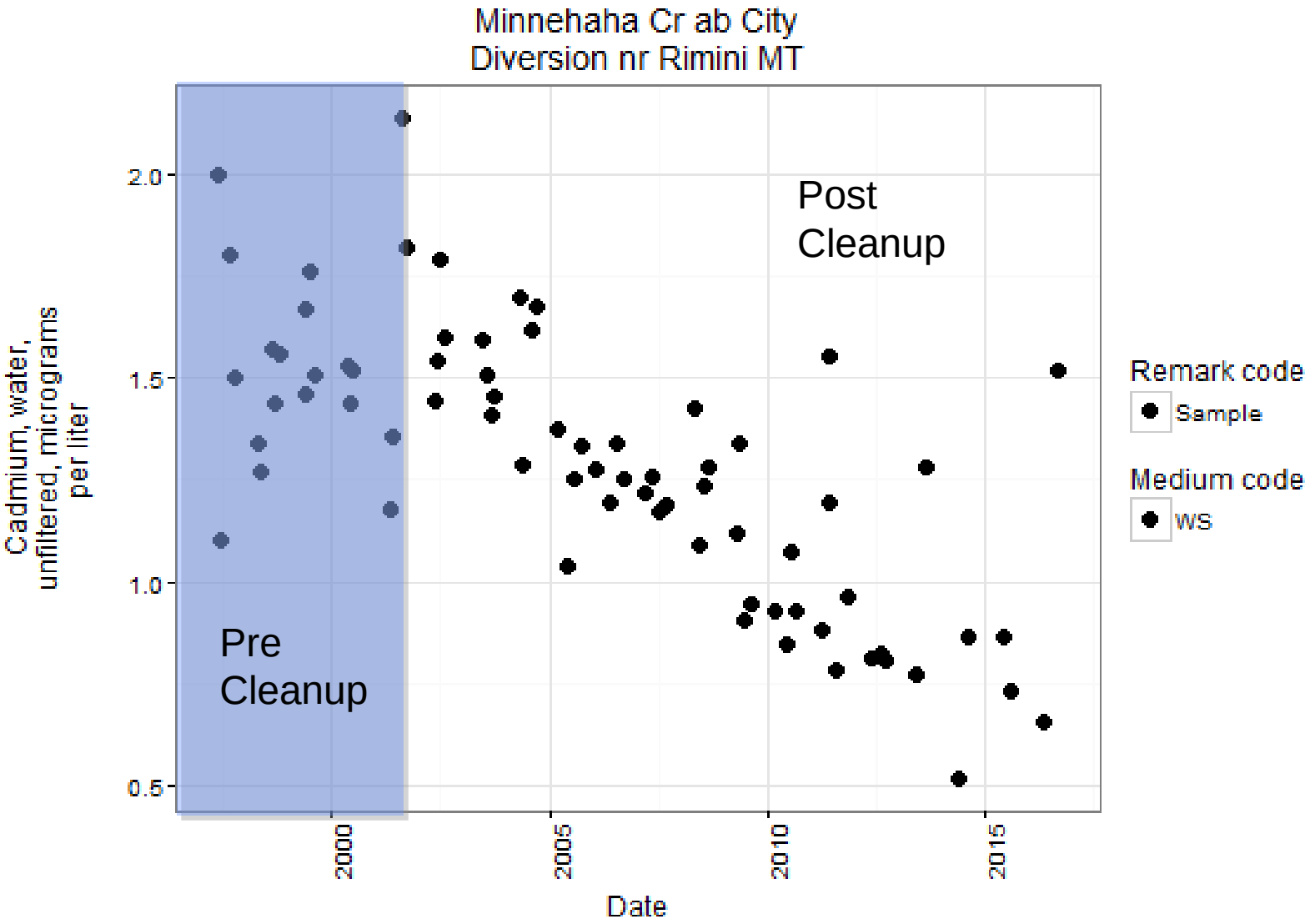
USGS


Tenmile Creek 2016 samples
Total Cd, ug/L
5
4
3
2
1
0
Low flow
High flow
ab City diversion
ab Suzie lode
bl Spring creek

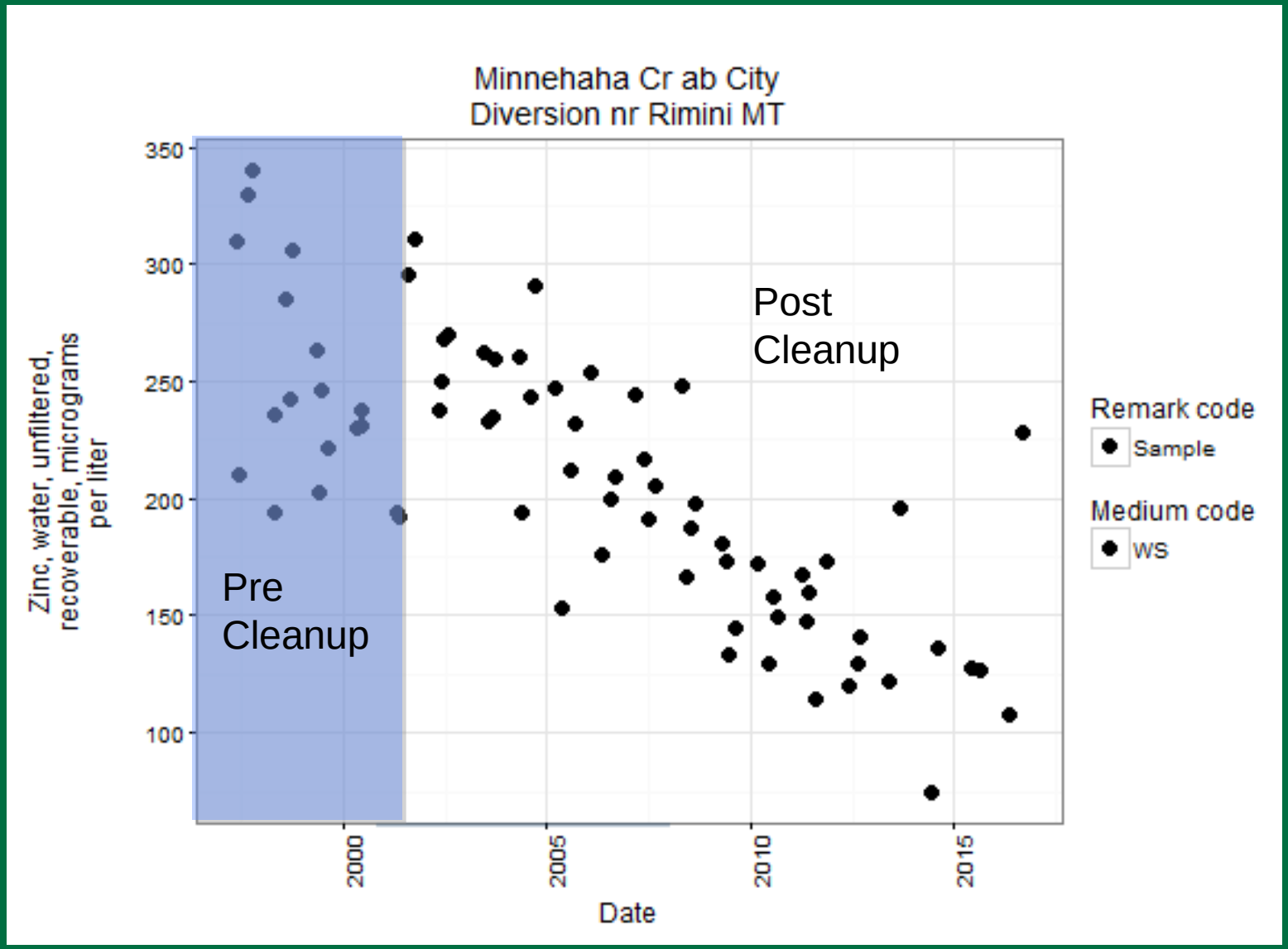
USGS

Minnehaha

USGS

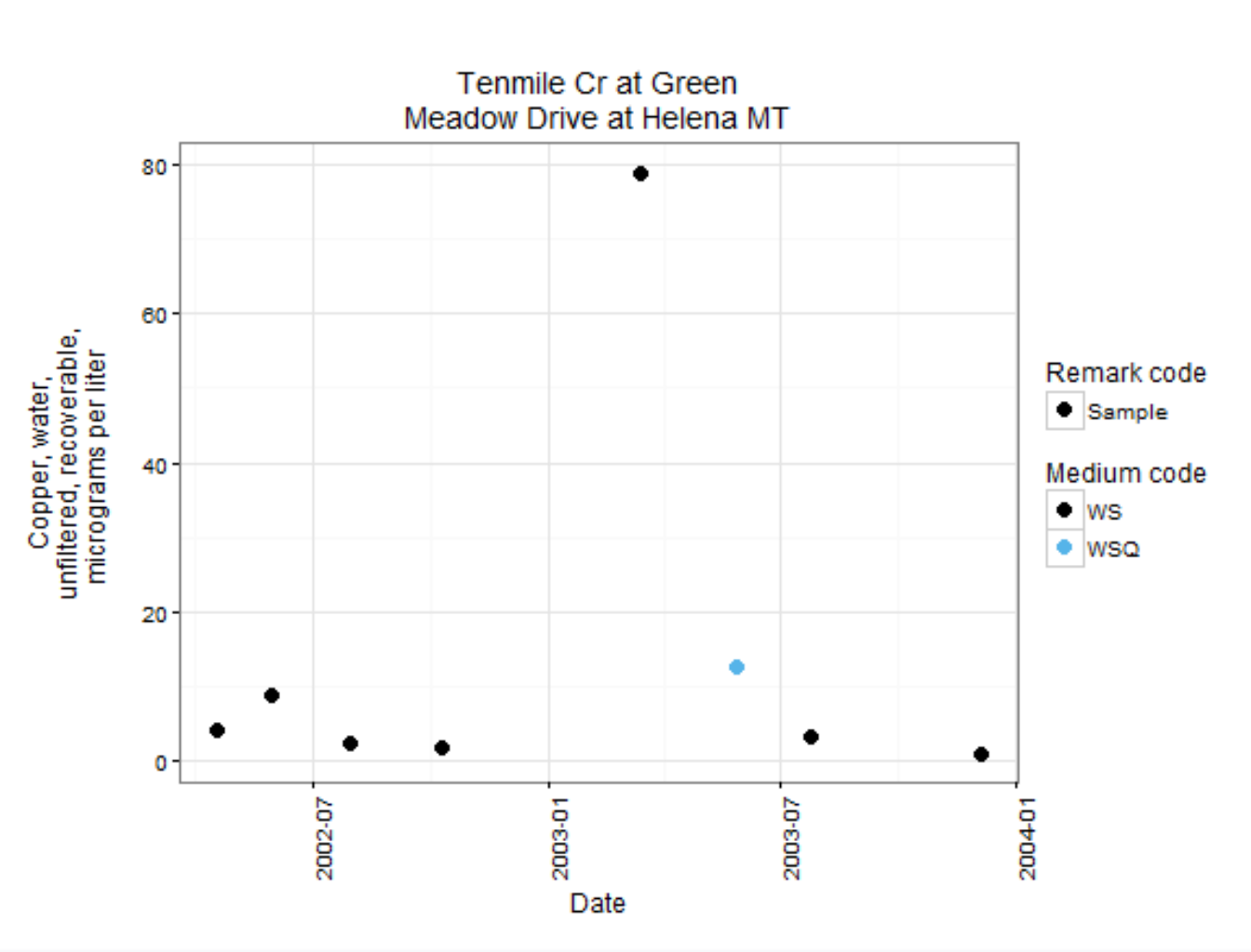

Minnehaha Cr ab City
Diversion nr Rimini MT
Cadmium, water, unfiltered, micrograms per liter
2.0
1.5
1.0
0.5
Post Cleanup
Pre Cleanup
2000
2005
2010
2015
Date
Remark code
Sample
Medium code
WS

USGS


Minnehaha Cr ab City
Diversion nr Rimini MT
Zinc, water, unfiltered, recowerable, micrograms per liter
350
300
250
200
150
100
2000
2005
2010
2015
Date
Pre Cleanup
Post Cleanup
Remark code
Sample
Medium code
WS

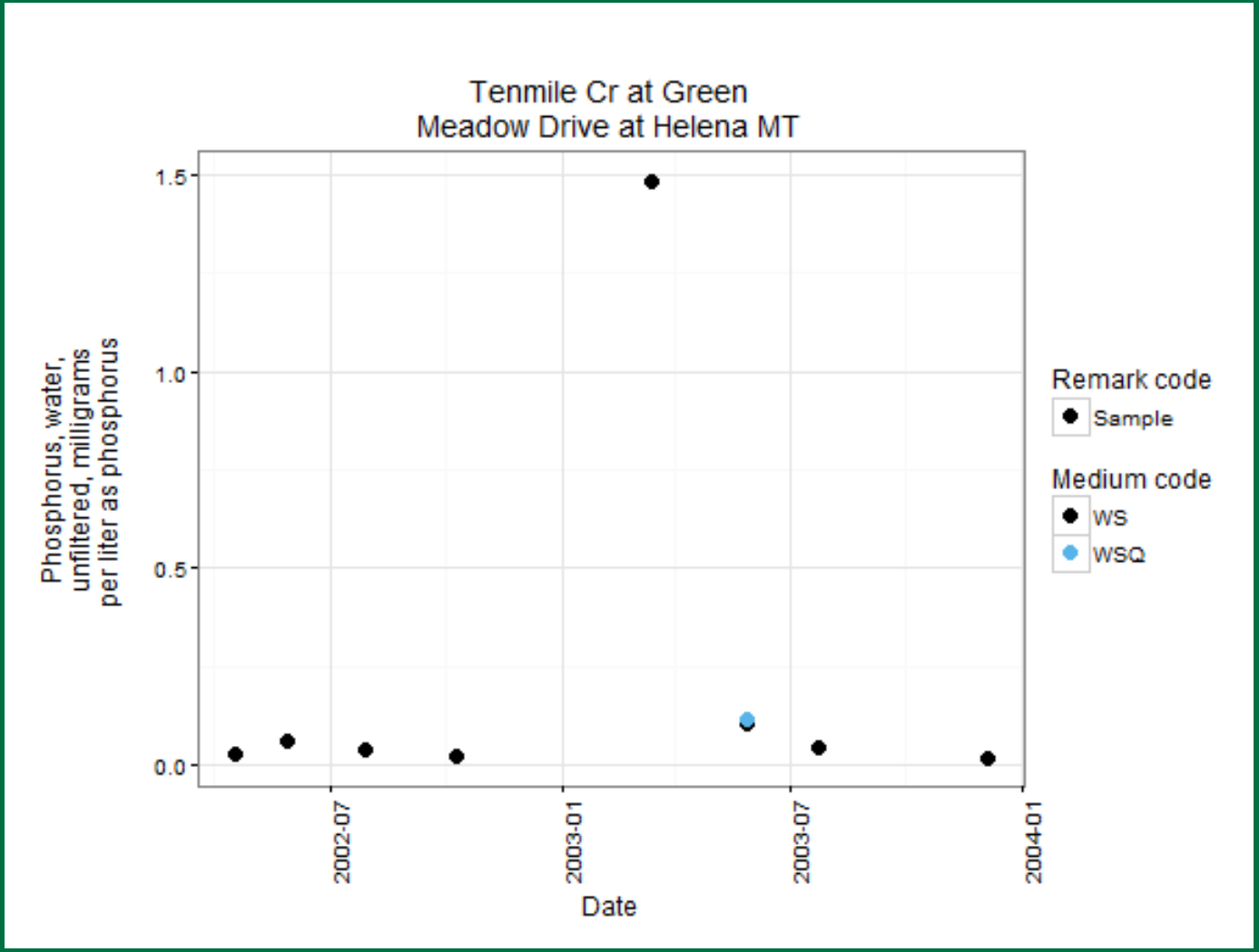
USGS

Lower Tenmile metals

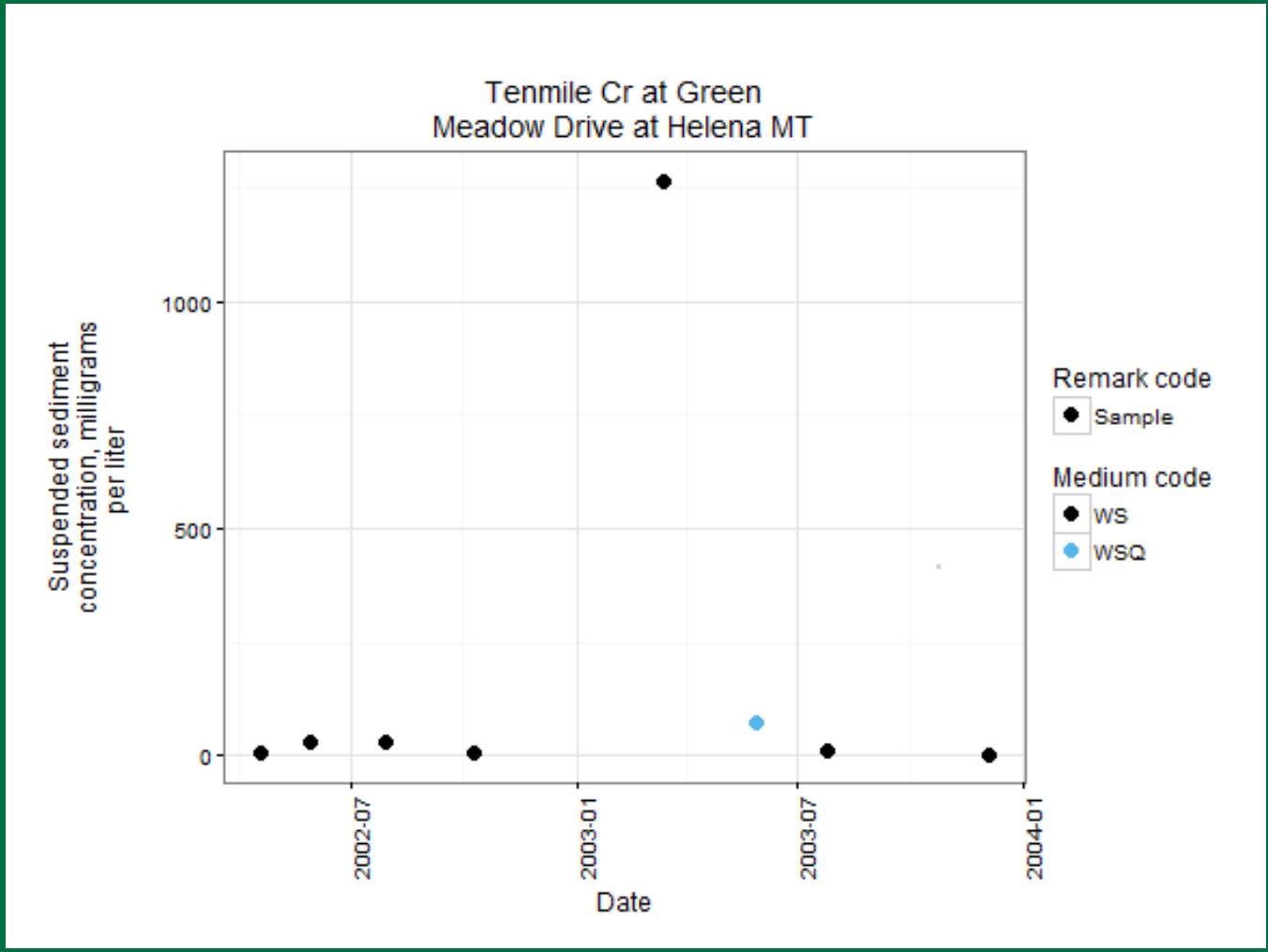


USGS

Lower Tenmile Nutrients

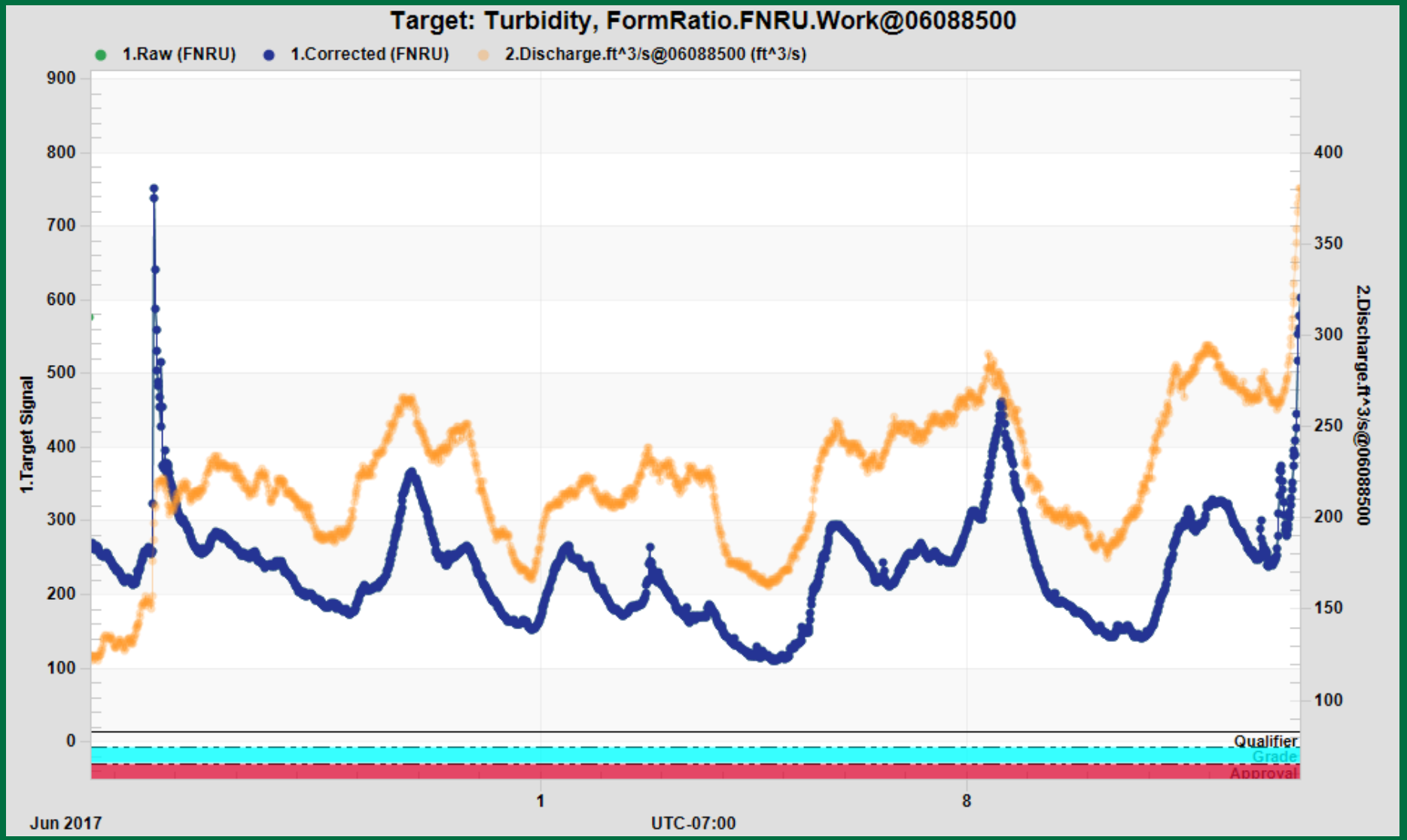


Lower Tenmile Suspended Sediment



USGS

Real time turbidity
Muddy Cr near Vaughn



https://wy-mt.water.usgs.gov/

USGS science for a changing world

USGS Home
Contact USGS
Search USGS

Wyoming-Montana Water Science Center

home | information/data | projects | publications | floodwatch | droughtwatch | contact | *internal*

Using the window between ice out and high flows to make repairs on the Dinwoody Creek streamgage, April 26, 2017.

Connect with USGS science

In Montana
In Wyoming
In Montana
In Wyoming

Search

DATA CENTER

Current conditions
- Streamflow WY | MT
- Groundwater WY | MT
- Water Quality WY | MT
- Lake/Reservoir WY | MT

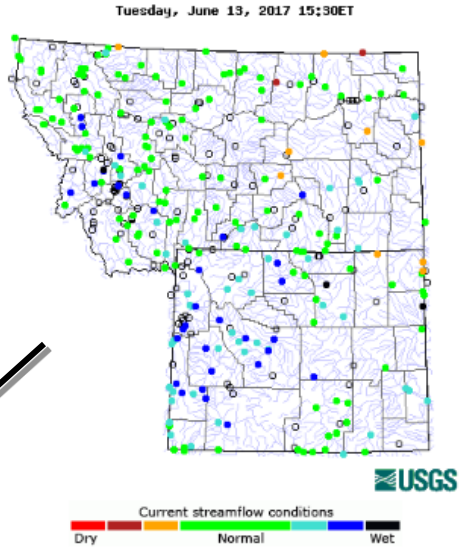
Historical data
- Streamflow WY | MT
- Groundwater WY | MT
- Water Quality WY | MT
- Annual Data Reports

Water Resources of Wyoming and Montana

Welcome to the USGS Wyoming-Montana Water Science Center. These pages are your source for water-resource information collected and interpreted by the U.S. Geological Survey in Wyoming and Montana. Here you'll find information on Wyoming's and Montana's rivers and streams. You'll also find information about ground water, water quality, and many other topics. The USGS operates the most extensive satellite network of stream-gaging stations in the states, many of which form the backbone of flood-warning systems.

Wyoming and Montana Water Data and Information

Current Streamflow Conditions



Quick Link to Real-Time Data

Enter a USGS site number: Go

USGS WaterAlert

Our WaterAlert service sends e-mail or text

News and Highlights

Historically, many floods have occurred in Wyoming and Montana during the month of May. In 1981, west-central Montana experienced record flooding due to extensive rainfall. Over 20 currently active streamgages keep track of the creeks and rivers in that area.

Recent Publications

Estimating current and future streamflow characteristics at ungaged sites, central and eastern Montana, with application to evaluating effects of climate change on fish populations

A relatively new technique was used to predict historical and future streamflows under different climate scenarios at 1,707 fish sampling sites across central and eastern Montana. Historical streamflow was predicted

Current Conditions for Montana: Water Quality -- 69 site(s) found

PROVISIONAL DATA SUBJECT TO REVISION

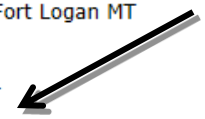
The USGS monitors water resources in Montana in cooperation with State, County, local, and other Federal agencies.

Temperature Converter: [ ] °F <=> °C [ ] Calculate

--- Predefined displays --- [Montana Water-Quality Table] Group table by [Major River Basin] Select sites by number or name [ ] go show sites on a map

Customize table to display other current-condition parameters

Station Number	Station name	Specific conductance, wat unf uS/cm @ 25 degC	Temperature, water, deg C	Turbidity, IR LED light, det ang 90 deg, FNU	Turbdty IR LED light, det ang 90 deg, corrctd FNRU	Date/Time
	UPPER MISSOURI RIVER BASIN					
06006000	Red Rock Cr ab Lakes nr Lakeview MT	--	4.7	--	--	06/13 13:30 MDT
06023000	Ruby River near Twin Bridges MT	--	9.0	--	--	06/13 13:45 MDT
06023100	Beaverhead River at Twin Bridges, MT	--	Ssn	--	--	06/13 13:30 MDT
06024450	Big Hole River bl Big Lake Cr at Wisdom MT	--	9.2	--	--	06/13 13:45 MDT
06024540	Big Hole River bl Mudd Cr nr Wisdom MT	--	0.9	--	--	06/13 13:30 MDT
06024580	Big Hole River near Wise River MT	--	10.2	--	--	06/13 13:30 MDT
06025250	Big Hole River at Maiden Rock nr Divide MT	--	Ssn	--	--	06/13 13:45 MDT
06025500	Big Hole River near Melrose MT	--	10.1	--	--	06/13 13:15 MDT
06026210	Big Hole River near Glen MT	--	Ssn	--	--	06/13 13:30 MDT
06026420	Big Hole R bl Hamilton Ditch nr Twin Bridges, MT	--	10.9	--	--	06/13 13:30 MDT
06026500	Jefferson River near Twin Bridges MT	--	10.9	--	--	06/13 13:15 MDT
06027600	Jefferson River at Parsons Bdg nr Silver Star, MT	--	Ssn	--	--	06/13 13:30 MDT
06035000	Willow Creek near Harrison MT	--	7.6	--	--	06/13 13:15 MDT
06036805	Firehole River at Old Faithful, YNP	--	4.6	--	--	06/13 13:00 MDT
06036905	Firehole River near West Yellowstone MT	256	11.6	--	--	06/13 13:00 MDT
06036940	Tantalus Creek at Norris Junction, YNP	--	22.4	--	--	06/13 13:30 MDT
06037100	Gibbon River at Madison Jct, YNP	471	--	--	--	04/27 10:00 MDT
06037500	Madison River near West Yellowstone, MT	254	12.0	--	--	06/13 13:30 MDT
06038500	Madison River bl Hebgen Lake nr Grayling MT	--	13.2	--	--	06/13 13:45 MDT
06038800	Madison River at Kirby Ranch nr Cameron MT	--	9.8	--	--	06/13 13:45 MDT
06040000	Madison River near Cameron MT	--	9.0	--	--	06/13 13:15 MDT
06041000	Madison River bl Ennis Lake nr McAllister MT	--	12.1	--	--	06/13 13:45 MDT
06052500	Gallatin River at Logan MT	--	9.6	--	--	06/13 13:00 MDT
06054500	Missouri River at Toston MT	--	11.9	--	--	06/13 13:00 MDT
06066500	Missouri River bl Holter Dam nr Wolf Cr MT	--	14.9	--	--	06/13 13:45 MDT
06073500	Dearborn River near Craig MT	--	12.7	--	--	06/13 13:15 MDT
06077200	Smith River bl Eagle Cr nr Fort Logan MT	--	11.2	--	--	06/13 13:15 MDT
06077500	Smith River near Eden MT	--	14.7	--	--	06/13 13:45 MDT
06085800	Sun River at Simms MT	--	14.9	--	--	06/13 13:30 MDT
06088500	Muddy Creek at Vaughn MT					
	Sub-Location 1	--	--	--	778	06/13 13:30 MDT
	LOWER MISSOURI RIVER BASIN					
06101630	Marias River at Highway 223 bridge near Chester MT	--	14.1	--	--	06/13 13:45 MDT



USGS

USGS 06088500 Muddy Creek at Vaughn MT

PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site | Time-series: Current/Historical Observations | GO

Click to hide station-specific text

Flood Tracking - Stage | Flood Tracking - Discharge | Gage-height Corrections | Base Rating | Shifted Rating

(About shift-adjusted ratings).

Station operated by the USGS Wyoming-Montana Water Science Center in cooperation with Montana Fish, Wildlife, and Parks .

Leaving USGS: U.S. Coast Guard boating safety tips.

This station managed by the Helena Field Unit.

Available Parameters	Available Period
☐ All 5 Available Parameters for this site	
☐ 00060 Discharge	1994-10-01 2017-06-13
☐ 00065 Gage height	2017-02-13 2017-06-13
☑ 63680 Turbidity, Form Neph, Sub-Location 1	2017-05-24 2017-06-13
☑ 63681 Turbidity, FormRatio, Sub-Location 1	2017-05-24 2017-06-13
☐ 99133 NO3+NO2,water,insitu, Sub-Location 1	2017-05-24 2017-06-13

Output format
- ◉ Graph
- ○ Graph w/ stats
- ○ Graph w/o stats
- ○ Graph w/ (up to 3) parms
- ○ Table
- ○ Tab-separated

Days (7)

-- or --

Begin date 2017-06-06

End date 2017-06-13

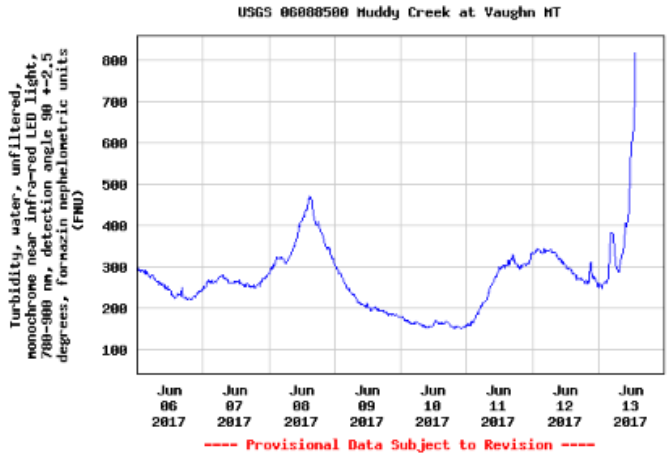
GO

Summary of all available data for this site

Instantaneous-data availability statement

Turbidity, water, unfiltered, monochrome near infra-red LED light, 780-900 nm, detection angle 90 +-2.5 degrees, formazin nephelometric units (FNU), Sub-Location 1

Most recent instantaneous value: 819 06-13-2017 13:30 MDT



Add up to 2 more sites and replot for "Turbidity, water, unfiltered, monochrome near infra-red LED light, 780-900 nm, detection angle 90 +-2.5 degrees, formazin nephelometric units (FNU), Sub-Location 1"

Add site numbers Note

Enter up to 2 site numbers separated by a comma. A site number consists of 8 to 15 digits

GO

Create presentation-quality graph. P63680 204817 A(3)

USGS 06088500 Muddy Creek at Vaughn MT

PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site Time-series: Current/Historical Observations GO

Click to hide station-specific text

Flood Tracking - Stage | Flood Tracking - Discharge | Gage-height Corrections | Base Rating | Shifted Rating

(About shift-adjusted ratings).

Station operated by the USGS Wyoming-Montana Water Science Center in cooperation with Montana Fish, Wildlife, and Parks .

Leaving USGS: U.S. Coast Guard boating safety tips.

This station managed by the Helena Field Unit.

Available Parameters	Available Period
☐ All 5 Available Parameters for this site	
☑ 00060 Discharge	1994-10-01 2017-06-13
☐ 00065 Gage height	2017-02-13 2017-06-13
☐ 63680 Turbidity, Form Neph, Sub-Location 1	2017-05-24 2017-06-13
☑ 63681 Turbidity, FormRatio, Sub-Location 1	2017-05-24 2017-06-13
☐ 99133 NO3+NO2,water,insitu, Sub-Location 1	2017-05-24 2017-06-13

Output format
- ○ Graph
- ○ Graph w/ stats
- ○ Graph w/o stats
- ◉ Graph w/ (up to 3) parms
- ○ Table
- ○ Tab-separated

Days (7)

-- or --

Begin date 2017-06-06

End date 2017-06-13

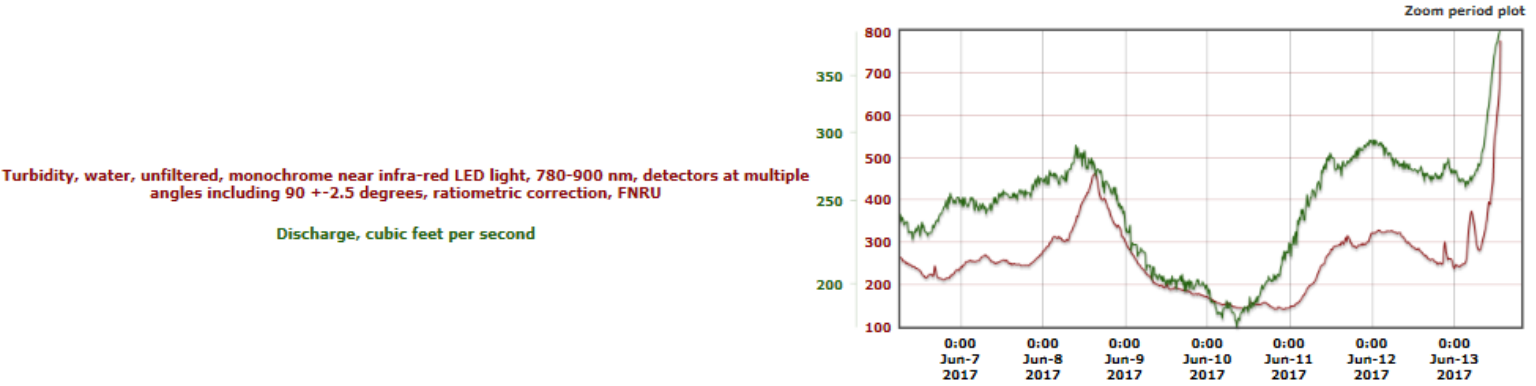
GO

Summary of all available data for this site

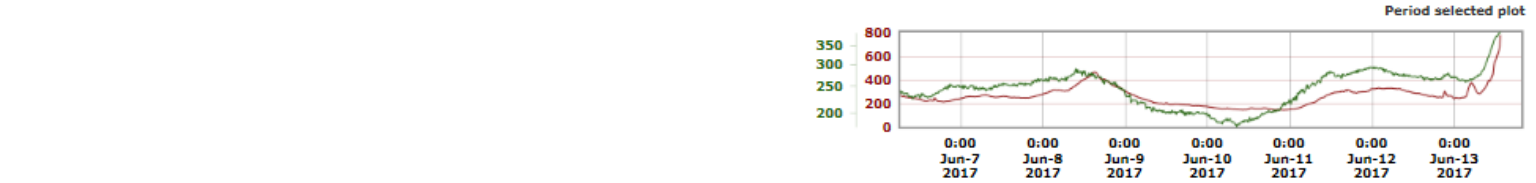
Instantaneous-data availability statement

USGS 06088500 Muddy Creek at Vaughn MT

Zoom period plot



Period selected plot



☐ Enable tooltip

https://wy-mt.water.usgs.gov/

USGS science for a changing world

USGS Home
Contact USGS
Search USGS

Wyoming-Montana Water Science Center

home | information/data | projects | publications | floodwatch | droughtwatch | contact | internal

Using the window between ice out and high flows to make repairs on the Dinwoody Creek streamgage, April 26, 2017.

Connect with USGS science

In Montana
In Wyoming
In Montana
In Wyoming

Search

DATA CENTER

Current conditions
- Streamflow WY | MT
- Groundwater WY | MT
- Lake/Reservoir WY | MT

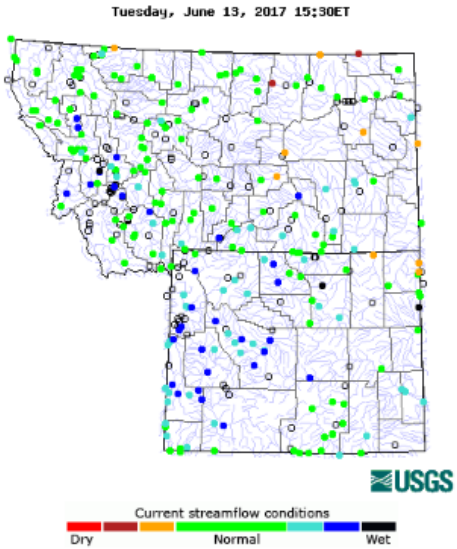
Historical data
- Streamflow WY | MT
- Groundwater WY | MT
- Water Quality WY | MT
- Annual Data Reports

Water Resources of Wyoming and Montana

Welcome to the USGS Wyoming-Montana Water Science Center. These pages are your source for water-resource information collected and interpreted by the U.S. Geological Survey in Wyoming and Montana. Here you'll find information on Wyoming's and Montana's rivers and streams. You'll also find information about ground water, water quality, and many other topics. The USGS operates the most extensive satellite network of stream-gaging stations in the states, many of which form the backbone of flood-warning systems.

Wyoming and Montana Water Data and Information

Current Streamflow Conditions



Quick Link to Real-Time Data

Enter a USGS site number:

Go

USGS WaterAlert

Our WaterAlert service sends e-mail or text

News and Highlights

Historically, many floods have occurred in Wyoming and Montana during the month of May. In 1981, west-central Montana experienced record flooding due to extensive rainfall. Over 20 currently active streamgages keep track of the creeks and rivers in that area.

Recent Publications

Estimating current and future streamflow characteristics at ungaged sites, central and eastern Montana, with application to evaluating effects of climate change on fish populations

A relatively new technique was used to predict historical and future streamflows under different climate scenarios at 1,707 fish sampling sites across central and eastern Montana. Historical streamflow was predicted

USGS Water-Quality Data for Montana

Click to hide state-specific text

Questions or concerns about USGS streamflow data in Montana and Wyoming can be directed to Kirk Miller (kmiller@usgs.gov; 307-775-9168).

Current Conditions **(68 <publicly viewable> sites)**

Current conditions at selected sites based on the most recent data from on-site automated recording equipment. Measurements are commonly recorded at a fixed interval of 15- to 60-minutes and transmitted to the USGS every hour. Values may include "Approved" (quality-assured data that may be published) and/or more recent "Provisional" data (of unverified accuracy and subject to revision). Most current data are provisional.

Historical Observations **(68 <publicly viewable> sites)**

The same data accessed by the Current Conditions link above but including both active and discontinued sites with data for any part of the period October 1, 2007, through the present. Values may include "Approved" (quality-assured data that may be published) and/or more recent "Provisional" data (of unverified accuracy and subject to revision).

Daily Data **(158 <publicly viewable> sites)**

Summary of all data for each day for the period of record and may represent the daily mean, median, maximum, minimum, and/or other derived value. Values may include "Approved" (quality-assured data that may be published) and/or more recent "Provisional" data (of unverified accuracy and subject to revision). Example.

Statistics **(149 <publicly viewable> sites)**

Daily | Monthly | Annual

Statistics are computed from approved daily mean data at each site. These links provide summaries of approved historical daily values for daily, monthly, and annual (water year or calendar year) time periods.

Field/Lab samples **(9,305 <publicly viewable> sites)**

Data from field and/or laboratory analyses of water samples, biological tissue, sediments, or other environmental samples. Data include approved, quality-assured data that may be published, and more recent provisional data, whose accuracy has not been verified.

Introduction

The U.S. Geological Survey's (USGS) National Water Information System (NWIS) is a comprehensive and distributed application that supports the acquisition, processing, and long-term storage of water data. Water Data for the Nation serves as the publicly available portal to a geographically seamless set of much of the water data maintained within NWIS (additional background).

The USGS collects and analyzes chemical, physical, and biological properties of water, sediment and tissue samples from across the Nation. The Water Data for the Nation discrete sample data base is a compilation of over 4.4 million historical water quality analyses in the USGS district data bases through September 2005. The discrete sample data is a large and complex set of data that has been collected by a variety of projects ranging from national programs to studies in small watersheds. Users should review the help notes and particularly the data retrieval precautions before beginning any retrieval or analysis of data from this data set. Additions of more current data, modifications to ancillary information, and enhanced retrieval options to help users find and appropriately use the data they need are planned for a future release of Water Data for the Nation.

At selected surface-water and groundwater sites, the USGS maintains instruments that continuously record physical and chemical characteristics of the water including pH, specific conductance, temperature, dissolved oxygen, and percent dissolved-oxygen saturation. Supporting data such as air temperature and barometric pressure are also available at some sites. At sites where this information is transmitted automatically, data are available from the current data system.

Once a complete day of readings are received from a site, daily summary data are generated and made available online. USGS finalizes data at individual sites on a continuous basis as environmental conditions and hydrologic characteristics permit.

You may find additional water-quality data of interest in EPA STORET.

Tutorial

Tutorials explaining how to perform water quality retrievals and understand the results of current data and discrete water-quality measurements.

Water Quality Samples for Montana

Click to hide state-specific text

Questions or concerns about USGS streamflow data in Montana and Wyoming can be directed to Kirk Miller (kmiller@usgs.gov; 307-775-9168).

Some complex retrievals may take a few minutes.

Choose Site Selection Criteria

There are 9,305 sites with water-quality data. Choose at least one of the following criteria to constrain the number of sites selected.

Site -- Location --	Site -- Identifier --	Site -- Attribute --	Data -- Attribute * --
☐ County	☐ Site Name	☐ Site type	☐ Number of observations
☐ Hydrologic Unit (by Code)	☐ Site Number	☐ Drainage area	☐ Period of record
☐ Hydrologic Unit (by Name)	☐ Multiple Site Numbers	☐ Well depth	☐ Sample medium type
☐ Lat-Long box	☐ Agency Code	☐ Hole depth	☐ Parameter Codes
	☐ File of Site Numbers	☐ National aquifer (by code)	☐ File of Parameter Codes
		☐ National aquifer (by name)	☐ Parameter groupings
		☐ Local aquifer (by code)	
		☐ Local aquifer (by name)	

** Selection of more than one data attribute will include all samples that meet all conditions selected.*

Submit Reset

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help

Data Tips
Explanation of terms
Subscribe for system changes
News

USGS

Water Quality Samples for Montana

Click to hide state-specific text

Questions or concerns about USGS streamflow data in Montana and Wyoming can be directed to Kirk Miller (kmiller@usgs.gov; 307-775-9168).

Some complex retrievals may take a few minutes.

Select sites that have samples which meet the following criteria:

Define one or more values for each of the following site-selection criteria: --- or select new criteria

County -- select one or more

- Lake County
- Lewis And Clark County
- Liberty County
- Lincoln County
- Mccone County
- Madison County

Choose Output Format

Display Summary of Selected Sites

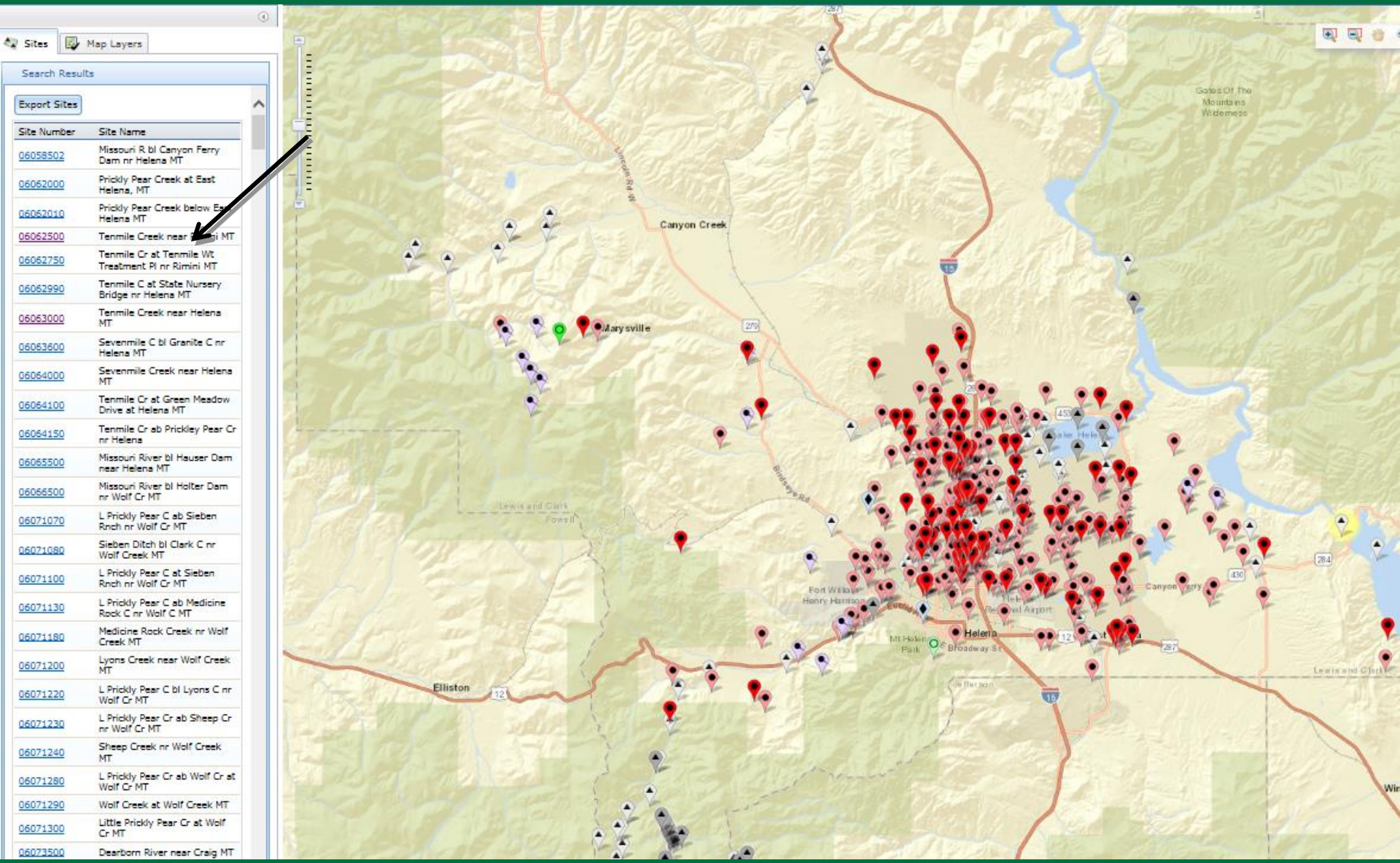
Choose one of the following options for displaying descriptions of the sites meeting the criteria above:

- ○ Show sites on a map NEW
- ◉ Table of sites grouped by
- ○ Scroll list of sites -- allows selection of data for multiple sites
- ○ Brief descriptions -- allows selection of data for multiple sites
- ○ Site-description information displayed in table format

(Select fields to include in site-description output)

- Agency
- Site identification number
- Site name
- Site type

- ○ Save file of selected sites to local disk for future upload
- ○ *Raw NWISWeb sitefile review (internal)*


Sites
Map Layers
Search Results
Export Sites
Site Number
Site Name
06058502 Missouri R bl Canyon Ferry Dam nr Helena MT
06062000 Prickly Pear Creek at East Helena, MT
06062010 Prickly Pear Creek below East Helena MT
06062500 Tenmile Creek near Rimini MT
06062750 Tenmile Cr at Tenmile Wt Treatment Pl nr Rimini MT
06062990 Tenmile C at State Nursery Bridge nr Helena MT
06063000 Tenmile Creek near Helena MT
06063600 Sevenmile C bl Granite C nr Helena MT
06064000 Sevenmile Creek near Helena MT
06064100 Tenmile Cr at Green Meadow Drive at Helena MT
06064150 Tenmile Cr ab Prickley Pear Cr nr Helena
06065500 Missouri River bl Hauser Dam near Helena MT
06066500 Missouri River bl Holter Dam nr Wolf Cr MT
06071070 L Prickly Pear C ab Sieben Rnch nr Wolf Cr MT
06071080 Sieben Ditch bl Clark C nr Wolf Creek MT
06071100 L Prickly Pear C at Sieben Rnch nr Wolf Cr MT
06071130 L Prickly Pear C ab Medicine Rock C nr Wolf C MT
06071180 Medicine Rock Creek nr Wolf Creek MT
06071200 Lyons Creek near Wolf Creek MT
06071220 L Prickly Pear C bl Lyons C nr Wolf Cr MT
06071230 L Prickly Pear Cr ab Sheep Cr nr Wolf Cr MT
06071240 Sheep Creek nr Wolf Creek MT
06071280 L Prickly Pear Cr ab Wolf Cr at Wolf Cr MT
06071290 Wolf Creek at Wolf Creek MT
06071300 Little Prickly Pear Cr at Wolf Cr MT
06073500 Dearborn River near Craig MT
Canyon Creek
Marysville
Helena
Elliston
Gates Of The Mountains Wilderness

USGS

USGS 06062500 Tenmile Creek near Rimini MT

Available data for this site SUMMARY OF ALL AVAILABLE DATA GO

Stream Site

DESCRIPTION:

Latitude 46°31'26.03", Longitude 112°15'23.93" NAD83
Lewis And Clark County, Montana, Hydrologic Unit 10030101
Drainage area: 33 square miles
Datum of gage: 4,850 feet above NAVD88.

AVAILABLE DATA:

Data Type	Begin Date	End Date	Count
Current / Historical Observations (availability statement)	1997-05-13	2017-06-13	
Daily Data			
Discharge, cubic feet per second	1914-10-01	2017-06-12	36567
Daily Statistics			
Discharge, cubic feet per second	1914-10-01	2016-10-05	36317
Monthly Statistics			
Discharge, cubic feet per second	1914-10	2016-10	
Annual Statistics			
Discharge, cubic feet per second	1915	2017	
Peak streamflow	1915-06-16	2016-04-23	100
Field measurements	1975-06-02	2017-05-19	455
Field/Lab water-quality samples	1981-09-08	2016-09-07	306
Water-Year Summary	2006	2016	11
Additional Data Sources	**Begin Date**	**End Date**	**Count**
Instantaneous-Data Archive **offsite**	1997-05-13	2007-09-30	307691

OPERATION:

Choose Output Format

Retrieve Water-Quality Samples for Selected Sites

Choose one of the following options for displaying data for the sites meeting the criteria above

- ○ Parameter Group Period of Record table
- ○ Inventory of water-quality data [For printing]
- ○ Tab-separated inventory of water-quality data [Save to file] *
- Retrieve data from: [ ] to: [ ] (YYYY-MM-DD -- **Blank = all data**)
- Retrieve sample time and time zone ◉ as stored ○ in UTC
- Retrieve samples for specified parameter values: [ ] (Parameter Code) [Greater than] [ ] (Numeric Value)
- Samples and parameters to include:
  - ○ Samples that include only above parameter selection criteria (Count: 0)
  - ◉ Samples that include above selection criteria and all associated parameters
  - ○ Samples that include above selection criteria plus one or more of these parameter codes separated by a comma (Limit: 200 codes).

    [ ] <--Find parameter codes
  - ○ Samples that include above selection criteria plus one or more of these parameters in a file

    Enter the full pathname of a file containing parameter codes. (Limit: 200 codes)

    [ ] [Browse...]

- ○ Table of data [Default attributes]
- ○ Tab-separated data [One sample per row with remark codes combined with values] [Default attributes] [YYYY-MM-DD] [Save to file] *

* Save compressed files with a .gz file extension.

USGS

USGS 06062500 Tenmile Creek near Rimini MT

Available data for this site: Water-Quality: Field/Lab samples GO

Lewis And Clark County, Montana
Hydrologic Unit Code 10030101
Latitude 46°31'26.03", Longitude 112°15'23.93" NAD83
Drainage area 33 square miles
Gage datum 4,850 feet above NAVD88

Output formats

- Parameter Group Period of Record table
- Inventory of available water-quality data for printing
- Inventory of water-quality data with retrieval
- Tab-separated data, one result per row
- Tab-separated data one sample per row with remark codes combined with values
- Tab-separated data one sample per row with tab-delimiter for remark codes
- Reselect output format

Sample Datetime	Time datum	Time datum reliability code	Sample Medium Code	Agency Collecting Sample, Code	Stream width, feet (00004)	Temperature, water, deg C (00010)	Temperature, air, deg C (00020)	Instantaneous discharge, ft3/s (00061)	Number of sampling points, count (00063)	Gage height, feet (00065)	Specific conductance, wat unf uS/cm @ 25 degC (00095)	Hydrogen ion, water, unfltrd calcd, mg/L (00191)	pH, water, unfltrd field, std units (00400)	pH, water, unfltrd lab, std units (00403)	Ha ne w m as Ca (0
2016-05-11 13:30	MDT	K	WS	USGS-WRD	20.0	4.9	9.6	71	10	2.48	45	0.00010	7.0	E 7.4	
2016-09-07 08:30	MDT	K	WS	USGS-WRD		8.3	10.0	1.6		1.33	123	0.00003	7.5	7.6	

Water Quality Remark Code	Description

USGS

Thanks!
If you have questions or need help pulling data from our database feel free to either call or email Tom or Chris

tcleasby@usgs.gov 457-5919
cellison@usgs.gov 457-5901

USGS